

## Product Evaluation

SHU186 | 0521

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

**Evaluation ID:** SHU-186

**Effective Date:** May 1, 2021

**Re-evaluation Date:** May 2025

**Product Name:** ES 44 SUP End Retention Aluminum Roll Up Shutters, Impact Resistant

**Manufacturer:** Croci North America  
11600 Adelmo Lane  
Suite 1  
Fort Myers, FL 33966  
(800) 951-1195

### General Description:

Aluminum extruded roll up shutters are assembled from interlocking extruded slats. The slats are mounted with the following components: the guide rails and the hood assembly. Consecutive single spans and multiple spans are connected with mullions. Aluminum extrusions must be 6003-T6 aluminum alloy, unless otherwise noted on the drawings. The shutters may be wall mounted, inset mounted, header mounted, built-out or any combination thereof.

**Slat Description:** The ES-44 SUP slats are 6063-T5 aluminum alloy with a thickness of 0.04" and a cross section of 2.02" wide by 0.37" deep.

**Limitations:**

**Design Drawings:** "ES 44 SUP Extruded Aluminum Roll-Up Shutter," Drawing No. 19-056.1, sheets 1 through 12 of 12, dated April 22, 2020, and signed and sealed by Pedro Figueiredo, P.E. on April 22, 2020. The stated drawings will be referred to as "approved drawings" in this evaluation report. A copy of the approved drawings shall be available at the job site

**Wall Construction:** The shutters may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength required specified in drawings)
- Grout-filled concrete masonry units (CMU); (minimum compressive strength required specified in drawings)
- Wood (minimum Southern Yellow Pine dimension lumber, S.G.=0.55)
- Steel (minimum A36, 1/8" thickness)
- Aluminum (minimum 6063-T6, 1/4" thickness)

**Mounting Configurations:** The shutters may be wall mounted, inset mounted, header mounted, built-out or any combination thereof.

**Span Configurations:** The shutters can be installed as a single span configuration or a multiple span configuration. Multiple span configurations require a mullion.

**Design Pressure Rating:** The design pressure rating for the roll up shutters is dependent on several factors, including the span, the mounting condition, and the mullion span. Refer to the approved drawings to determine the allowable design pressure rating for the shutter assembly based on the configuration of the roll-up shutter assembly used. In no case shall the design pressure rating exceed +/-110 psf.

**Maximum Spans:** The maximum allowable spans are specified on page 1 of 12. In no case can the span exceed 124".

**Maximum Mullion Height:** The maximum allowable vertical mullion height is specified in a table on page 8 of 12 of the approved drawings.

**Minimum Separation from Glass:** The minimum glazing separation requirements are specified in the approved drawings. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

**Product Identification:** The shutter assemblies have a manufacturer-produced label that indicates the manufacturer (Crocì North America); the name of the product (Crocì Extruded Roll Up Slat ES/44 SUP); the TDI Evaluation Report number (SHU-186); the missile level (Missile Level D); the design pressure and installation are in accordance with Drawing 19-056; and the test standards: ASTM E 330-02, ASTM E 1886-04, and ASTM E 1996-04.

**Compliance:** The shutters comply with ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

**Impact Resistance:** This shutter assembly satisfies the TDI criteria for protection from windborne. The shutters passed Missile Level D specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. The shutters may not be installed below a height of 30 feet on essential facilities as defined in ASTM E 1996-14a.

**Installation:**

**General Installation Requirements:** The shutters must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the shutter assembly.

**Anchorage:** The shutters must be anchored to the structure in accordance with the approved drawings.

**Note:** Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.